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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/828,893

04/20/2004

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P-B199-CIP

5851

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10/15/2007

EXAMINER

COLE, ELIZABETH M

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/828,893	<b>Applicant(s)</b> YAEGER ET AL.	
	<b>Examiner</b> Elizabeth M. Cole	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/17/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

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1. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not provide support for the limitation that the continuous phase comprises amorphous polymers. The specification does not state whether the polymers are amorphous, crystalline or semi crystalline.

2. It is noted that new claims have been submitted. The species "epoxies" was elected in the response of 7/18/06. This election is applied to the new claims as well.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Polovina, U.S. Patent No.

3,798,057 as further evidenced by "Raman scattering in amorphous and crystalline materials: a study of epoxy resin and DGEBA". Polovina discloses a fibrous web which

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is impregnated with a composition comprising a polyepoxy compound. See col. 1, lines 61- col. 2, line 3; col. 3, lines 6-26. The impregnating composition corresponds to the claimed continuous phase. The impregnated fibrous web is useful as a water contact body for evaporative coolers. The impregnating composition can further comprise fillers which correspond to the claimed discontinuous phase in an amount of up to 50 percent. See col. 3, lines 27-49. The finished product comprises 10-30 percent of the impregnating composition by weight of the finished product. See col. 4, lines 44-46. Polovina differs from the claimed invention because it does not particularly disclose the claimed non polar solubility parameter, the polar solubility parameter, the hydrogen bond solubility parameter, the surface tension, interfacial tension or that the continuous phase is cationic. However, since Polovina discloses the same materials which are used for the same purpose, it is reasonable to presume that the materials of Polovina would meet the claimed property limitations. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112-2112.02.

6. With regard to the limitation that the continuous phase comprises an amorphous polymer, "Raman Scattering" establishes that diglycidyl ethers of bisphenol A are amorphous polymers. See entire document. Therefore, since Polovina teaches that the impregnating composition comprises a diglycidyl ether of bisphenol A as the epoxy

compound which is used in the impregnating compound, the impregnating composition of Polovina comprises an amorphous polymer.

7. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polovina, U.S. Patent No. 3,798,057 as further evidenced by "Raman scattering in amorphous and crystalline materials: a study of epoxy resin and DGEBA". Polovina discloses a fibrous web which is impregnated with a composition comprising a polyepoxy compound. See col. 1, lines 61- col. 2, line 3; col. 3, lines 6-26. The impregnating composition corresponds to the claimed continuous phase. The impregnated fibrous web is useful as a water contact body for evaporative coolers. The impregnating composition can further comprise fillers which correspond to the claimed discontinuous phase in an amount of up to 50 percent. See col. 3, lines 27-49. The finished product comprises 10-30 percent of the impregnating composition by weight of the finished product. See col. 4, lines 44-46. Polovina differs from the claimed invention because it does not particularly disclose the claimed non polar solubility parameter, the polar solubility parameter, the hydrogen bond solubility parameter, the surface tension, interfacial tension or that the continuous phase is cationic. However, since Polovina discloses the same materials which are used for the same purpose, it is reasonable to presume that the materials of Polovina would meet the claimed property limitations. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205

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USPQ 594 (CCPA 1980). See MPEP §§ 2112- 2112.02. Polovina teaches that the impregnating compound can comprise an epoxy resin which is a diglycidyl ether of bisphenol A, but does not specifically disclose that this material is amorphous. "Raman Scattering" establishes that diglycidyl ethers of bisphenol A can be amorphous polymers. See entire document. Therefore, since Polovina teaches that the impregnating composition comprises a diglycidyl ether of bisphenol A as the epoxy compound which is used in the impregnating compound, and "Raman Scattering" teaches that diglycidyl ethers of bisphenol A can be amorphous polymers, it would have been obvious to have selected an amorphous diglycidyl ether of bisphenol A as the epoxy resin in Polovina, since "Raman Scattering" establishes that diglycidyl ethers of bisphenol A which are amorphous polymers were known and therefore, since Polovina teaches diglycidyl ethers of bisphenol A generally, the choice of an amorphous diglycidyl ether of bisphenol A would have been obvious at the time the invention was made.

8. Applicant's arguments filed 7/30/07 have been fully considered but they are not persuasive. Applicant argues that Polovina does not anticipate the claimed rejection because Polovina discloses impregnating the fibrous web with chlorinated polymers. However, Polovina is relied on for the teaching of impregnating the webs with an epoxy resin. Applicant elected epoxy resin as the polymeric species of the continuous phase. The fact that Polovina includes other components is not relevant since the claims do not preclude additional components.

9. Applicant argues that Polovina does not disclose amorphous polymers.

However, as set forth Polovina discloses epoxy resins which are diglycidyl ethers of bisphenol A. As evidenced by the "Raman Scattering" publication, such epoxy resins appear to be amorphous.

10. Applicant argues that the chlorinated polymers of Polovina are crystalline.

However, as set forth above, the claims recite a fibrous material impregnated with a continuous phase comprising an amorphous polymer. Polovina teaches this structure. The fact that other components are included is not relevant since the claims do not preclude additional components.

11. Applicant argues that the chlorinated polymers of Polovina would not function in the present invention. However, as set forth above, the instant claims do not preclude the presence of additional components.

12. Applicant argues that Polovina does not add guidance as to polymers that could be used besides polypropylene and polyisoprene. However, as set forth above, Polovina teaches employing the elected species of epoxy resin to form the continuous phase. Therefore, Polovina teaches the claimed invention.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794

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